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ART. IX.—*Ancient Monuments of the Mississippi Valley.*

By E. G. SQUIER, A. M., and E. H. DAVIS, M. D.

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THE volume before us worthily commences the series of the publications of the Smithsonian Institute. In its character and execution it does credit to the auspices under which it has appeared. The subject to which it relates, besides being of great interest, and hitherto but little explored, is exclusively an American subject, but at the same time one that presents claims to the attention of scholars in other countries. The researches and discoveries which the work details are not merely fitted to excite temporary wonder and surprise, but have an important bearing on the ancient history of our Continent, and the much vexed question of the origin and extent of the Mexican semi-civilization.

For a long time it had been known, that there was a vast number of ancient earthworks spread over the western part of our country. But the ideas with regard to them were, for the most part, vague and confused. Ignorance and charlatanism had combined to obscure the subject. It had not been understood, whether they were the remains of tribes of the present Indian race, or of some ancient and unknown people. Few of them had been carefully examined. Their objects, the differences in their construction, their relation to ancient remains in other countries had never been studied. The crowding occupations of frontier life allowed little attention to be devoted to these remains of the past, while the plough and the spade often aided the efforts of time to obliterate their traces.

At length, Mr. Squier, with an enlightened zeal, determined to investigate the extent and character of these works. In his researches, he was aided by Dr. Davis, of Ohio. They commenced their operations in the spring of 1845, and continued them, with slight intermission, until the summer of 1847. They brought to their undertaking the qualities necessary to its successful accomplishment; and the volume which contains the results of their labors gives evidence of their intelligence, energy, and accuracy. We shall attempt

to present, in a concise form, the more remarkable features of their investigations and discoveries.

“The ancient monuments of the Western United States,” says Mr. Squier, who is the writer of the volume, “consist for the most part of elevations and embankments of earth and stone, erected with great labor and manifest design.” In connection with these works are found relics of art, consisting of ornaments and utensils of various kinds, and formed of stone, copper, clay, shells, bone, and other substances. They are spread over a vast extent of territory, from the Lakes on the North to the Gulf of Mexico on the South, and from the base of the Alleghanies on the East to the Rocky Mountains, and perhaps, but this is very doubtful, to the Pacific, on the West.* They are by no means uniformly distributed over this immense district, but are found most numerous in the valleys of streams, or on the summits of the neighboring hills; and it has been noticed in many cases, that they occur in great numbers near points which have become the sites of the most flourishing towns of the present inhabitants.†

“Nor is their magnitude less a matter of remark than their number. Lines of embankment, varying in height from five to thirty feet, and enclosing areas of from one to fifty acres, are common; while enclosures of one or two hundred acres are far from infrequent. Occasional works are found enclosing as many as four hundred acres. The magnitude of the area enclosed is not, however, always a correct index of the amount of labor expended in the erection of these works. A fortified hill in Highland county, Ohio, has one mile and five-eighths of heavy embankment; yet it encloses an area of only about forty acres. A similar work on the Little Miami river, in Warren county, Ohio, has upwards of four miles of embankment, yet it encloses little more than one hundred acres. The group of works at the mouth of the Scioto river has an aggregate of at least twenty miles

* Mr. Squier states in a note to the opening chapter, that “the mound-builders seem to have skirted the southern border of Lake Erie, and spread themselves in diminished numbers over the western part of the State of New York.” This opinion later investigations have led him to modify. In an interesting paper, read before the New York Historical Society and reported in the *N. Y. Daily Tribune* of January 3d, 1849, giving a brief description of the earthworks of New York, he says, “I am driven to a conclusion, little anticipated when I started upon my trip of exploration, that the earthworks of Western New York were erected by the Iroquois or their western neighbors, and do not possess an antiquity going very far back of the discovery.”

† For instance, at Marietta, Portsmouth, Cincinnati, &c., in Ohio; Frankfort in Kentucky; St. Louis in Missouri.

of embankment ; yet the entire amount of land embraced within its walls does not probably much exceed two hundred acres."

Such are the embankments.

" The mounds are of all dimensions, from those of but a few feet in height and a few yards in diameter, to those which, like the celebrated structure at the mouth of Grave Creek in Virginia, rise to the height of seventy feet, and measure one thousand feet in circumference at the base. The great mound in the vicinity of Miamisburgh, Montgomery county, Ohio, is sixty-eight feet in perpendicular height, and eight hundred and fifty-two in circumference at the base, containing 311,353 cubic feet. The truncated pyramid at Cahokia, Illinois, has an altitude of ninety feet and is upwards of two thousand feet in circumference at the base. It has a level summit of several acres area. The great mound at Selzerstown, Mississippi, is computed to cover six acres of ground. Mounds of these extraordinary dimensions are most common at the South, though there are some of great size at the North. The usual dimensions are, however, considerably less than in the examples here given. The greater number range from six to thirty feet in perpendicular height, by forty to one hundred feet diameter at the base." pp. 4, 5.

These earth and stone works fall naturally into the two classes, of Enclosures and Mounds. Mr. Squier has subdivided these classes under the heads of Enclosures for defence, and for sacred and miscellaneous purposes, and Mounds of Sacrifice, of Sepulture, and Temple Mounds. In this division we shall follow him. The enclosures vary as much in form as in size.

" Perhaps the larger portion of them are regular in outline, the square and the circle predominating. The regular works are almost invariably erected on level river terraces, great care having evidently been taken to select those least broken. The irregular works are those which partake most of the character of defences, and are usually made to conform to the nature of the ground upon which they are situated, running along the brows of hills or cutting off the approaches to strong natural positions. The square and the circle often occur in combination, frequently communicating with each other or with irregular works, directly, or by avenues consisting of parallel lines of embankment. Detached parallels are numerous." p. 6.

It is a fact well worth noting, as one from which an inference may be drawn with regard to the state of knowledge among the builders of these works, that many of them are

geometrically perfect in shape, the squares and circles being accurate squares and circles, and in some cases polygonal works being equilateral. It is the more remarkable, as these works often embrace areas of many acres, and the embankments necessarily extend to great length. In connection with this fact, it is deserving of mention that five works in the valley of the Scioto river, Ohio, exhibit a combination of the square and two circles of corresponding dimensions, the sides of each of the squares being ten hundred and eighty feet in length, and the diameters of the circles being a fraction over seven-teen hundred, and eight hundred feet respectively.

The works which have a defensive character occupy, as has already been noticed, the strongest positions ; either upon the summits of hills difficult of access, or cutting off the peninsulas and headlands formed by the rivers and large streams. The positions appear to have been chosen with great care. On the hills, they always occupy the highest points, and are never commanded by neighboring elevations. "The embankment is thrown up along, and a little below, the brow of the hill, varying in height and solidity as the declivity is more or less steep and difficult of access." At the entrances and the points most easily approached, the walls overlap each other ; and there are frequently interior lines of embankment. In many cases, a mound is situated near these points, within or without the walls, apparently to serve as a lookout, from which an approaching enemy might be observed.

From the numerous descriptions of defensive works which are given by Mr. Squier, we select one which will convey a general idea of the features of the class. It is a work in Highland county, Ohio, known as Fort Hill. "The defences occupy the summit of a hill which is five hundred feet above the bed of Brush creek at its base. Unlike the hills around it, this one stands detached and isolated." "Its sides are steep and precipitous ; and except at one or two points, if not absolutely inaccessible, extremely difficult of ascent." "The top of the hill is level and has an area of not far from fifty acres, which is covered with a heavy primitive forest of gigantic trees. One of these, a chestnut, standing on the embankment, measures twenty-one feet in circumference ; another, an oak, which also stood on the wall, though now fallen and much decayed, still measures twenty-three feet in circumfer-

ence. All around are scattered the trunks of immense trees in every stage of decay ; the entire forest presenting an appearance of the highest antiquity.”

“ Thus much for its natural features. Running along the edge of the hill is an embankment of mingled earth and stone, interrupted at intervals by gateways. Interior to this is a ditch from which the material composing the wall was taken.* The length of the wall is eight thousand two hundred and twenty-four feet, or something over a mile and a half. In height, measuring from the bottom of the ditch, it varies from six to ten feet, though at some places it rises to the height of fifteen feet. Its average base is thirty-five or forty feet. It is thrown up somewhat below the brow of the hill, the level of the terrace being generally about even with the top of the wall, but in some places it rises considerably above. The outer slope of the wall is more abrupt than that of the hill ; the earth and stones from the ditch, sliding down fifty or a hundred feet, have formed a declivity for that distance, so steep as to be difficult of ascent even with the aid which the trees and bushes afford. The ditch has an average width of not far from fifty feet ; and in many places is dug through the sandstone layer upon which the soil of the terrace rests. The inner declivity of the ditch appears to have been terraced.” pp. 14, 15.

There are thirty-three openings in the wall, most of which appear to have been designed to let off the water which might otherwise accumulate in the ditch. There are three depressions or ponds within the enclosure, the water in the largest of which, when full, must have covered nearly an acre.

“ Such are the more striking features of this interesting work. Considered in a military point of view, as a work of defence, it is well chosen, well guarded, and with an adequate force impregnable to any mode of attack practised by a rude or semi-civilized people. As a natural stronghold, it has few equals ; and the degree of skill displayed, and the amount of labor expended in constructing its artificial defences, challenge our admiration and excite our surprise. With all the facilities and numerous mechanical appliances of the present day, the construction of a work of this magnitude would be no insignificant undertaking.” p. 16.

* Lest it should occur to our readers that the builders of this work were no greater adepts in the art of military defence than one of our distinguished generals in the late war with Mexico is said to have been, it should be observed that, in building such a work on the slope of a hill, the earth would naturally be thrown from the inside, outwards. In the case of these ancient defensive works on level ground, the ditch is on the outside.

“The evidence of antiquity afforded by the aspect of the forest is worthy of more than a passing notice. Actual examination showed the existence of not far from *two hundred* annual rings or layers to the foot, in the large chestnut tree already mentioned, now standing upon the entrenchments. This would give nearly *six hundred* years as the age of the tree. If to this we add the probable period intervening from the time of the building of this work and its abandonment, and the subsequent period up to its invasion by the forest, we are led irresistibly to the conclusion that it has an antiquity of at least *one thousand years*. But when we notice, all around us, the crumbling trunks of trees half hidden in the accumulating soil, we are induced to fix upon an antiquity still more remote.” p. 16.

There is a curious work built of stone on Duck river, Tennessee, cutting off a peninsula formed by the junction of two branches of the river. It encloses an area of thirty-two acres, and the labor in constructing it must have been enormous, as it appears that the walls are from eight to ten feet high, and sixteen feet in thickness at the base by five at the top. The wall, stretching across the point of the peninsula, is guarded by two ditches, one sixteen to twenty feet in width by six or eight in depth, and the other, in some places, seventy to eighty feet wide, and from twenty-five to thirty feet deep.

It is a remarkable circumstance, that almost invariably provision seems to have been made for a supply of water within the walls of these works. This fact, together with their vast size, leads to the supposition that they must have been used as the retreats of great numbers of people, obliged to withstand a long siege, and that, perhaps, the largest of them may have been defences raised around the villages of the nation.

Such are some of the principal features of these ancient defensive works. We now pass to the description of the sacred enclosures.

The structure, the form, and the position of many of the earthworks conclusively prove, that they could not have been intended for defensive purposes; and the situations in which they are found, and the character of the mounds which are associated with them, in most cases afford satisfactory evidence, that they were in some manner related to the religious observances of the people who erected them.

“ They are mostly regular in their structure, and occupy the broad and level river bottoms, seldom occurring upon the table lands, or where the surface of the ground is undulating or broken. They are usually square or circular in form ; sometimes they are slightly elliptical. Occasionally we find them isolated, but more frequently in groups. The greater number of the circles are of small size, with a nearly uniform diameter of two hundred and fifty or three hundred feet, and invariably have the ditch interior to the wall. These have always a single gateway, opening oftenest to the east, though by no means observing a fixed rule in that respect. It frequently happens that they have one or more small mounds, of the class denominated sacrificial, within the walls. These small circles occasionally occur within larger works of a different character. Apart from these, numerous little circles, from thirty to fifty feet in diameter, are observed in the vicinity of large works. They consist of very slight embankments of earth, and have no entrances or passage-ways. It has been suggested, that these are the remains of ancient lodges or buildings. The accounts which we have of the traces left of the huts of the Mandans and other Indians, at their deserted villages, render this supposition not improbable. It sometimes happens that we find small circles embracing large mounds ; these can hardly be regarded as of the same character with that numerous class already noticed.

“ The larger circles are oftenest found in combination with rectangular works, connected with them directly, or by avenues. Some of these circles are of great extent, embracing fifty or more acres. They seldom have a ditch ; but whenever it occurs, it is interior to the wall. As in the case of the square and rectangular works to which they are attached, (which, it is believed, never have ditches, exterior or interior,) the walls are usually composed of earth taken up evenly from the surface, or from large pits in the neighborhood. Evident care appears in all cases to have been exercised in procuring the material, to preserve the surface of the adjacent plain smooth, and as far as possible unbroken. This fact is in itself almost conclusive against the supposition of a defensive design, especially as we have abundant evidence that the mound-builders understood perfectly the value of the external fosse in their works of defence. The walls of these works are for the most part comparatively slight, varying from three to seven feet in height. Sometimes they are quite imposing ; as in the case of the great circle at Newark, Licking county, Ohio ; where, at the entrance, the wall from the bottom of the ditch has a vertical height of not far from thirty feet. The square or rectangular works attending these large circles are of various dimensions.” p. 48.

“ Another class of works, probably akin to those here noticed are the parallels, consisting of slight embankments, seven or eight hundred feet in length and sixty or eighty feet apart.”

The variety of these works is so great that it would be impossible, from a detailed description of any one of them, to gain a general idea of the whole. The larger and more remarkable of them present also such a complication of embankments, that it would be difficult, without the assistance of the admirable plates by which they are illustrated in the volume before us, to give an intelligible account of their construction. The work at Newark, referred to in the extract above quoted, covers an extent of about two miles square, and exhibits a combination of all the different forms which have been described. A still more remarkable work near Portsmouth, at the confluence of the Ohio and Scioto rivers, consists of three divisions or groups, extending for eight miles along the Ohio river, and connected by parallel lines of embankment, measuring about four feet in height by twenty feet base. The walls of the principal works are about twelve feet high by about thirty-five or forty feet base. In the whole, there are upwards of twenty miles of embankment.

The number and magnitude of such works convey a striking impression of the character of their builders; of their populousness, their power, and their spirit of combined action.

A singular class of earthworks has been met with at the West, the object of which is not understood. It consists of *graded ways*, which are found proceeding from one river terrace to another, or from the terraces to the banks of the rivers. A work of this description occurs in Piketon, Ohio. “ It consists,” says Mr. Squier, “ of a graded ascent from the second to the third terrace, the level of which is here seventeen feet above that of the former. The way is ten hundred and fifty feet long, by two hundred and fifteen wide at one extremity, and two hundred and three feet wide at the other, measured between the bases of the banks.” The embankments upon the outside, vary from five to eleven feet in height, while at the lower extremity upon the inside they are twenty-two feet high. It is a little curious, that the easy ascent thus formed has been made use of in the construction of a turnpike which now passes between these walls. “ From

the end of the right-hand wall, upon the third terrace, extends a low line of embankment, (now much obliterated by the construction of the turnpike,) two thousand five hundred and eighty feet long, leading towards a group of mounds," and connected with another line of embankment of less length. We must wait for further investigations to explain the object of a work exhibiting so great labor, and the relation in which it stands to the others we have described.

A few earthworks have been found in the Ohio valley, which do not come under the head of enclosures, and yet which cannot technically be designated as mounds. They are erections of earth in the form of animals, clearly distinct from the animal-shaped works occurring in some of the North-Western States, and of which we shall have to speak hereafter, but like them difficult to account for in respect to their origin and their object. The most extraordinary work of this kind which has yet been discovered is what is called the Great Serpent, in Adams county, Ohio. It is situated on the summit of a hill; the head rests near one end, while the body stretches back in snake-like undulations for seven hundred feet, the tail terminating in a triple coil. The embankment of which it is formed is about five feet in height by thirty feet base at the centre of the body, but diminishing somewhat toward the head and tail.

"The entire length if extended would be not less than a thousand feet. The neck of the serpent is stretched out and slightly curved, and its mouth is opened wide, as if in the act of swallowing or ejecting an oval figure which rests partially within the distended jaws. This oval is formed by an embankment of earth without any perceptible opening, and is perfectly regular in outline, its transverse and conjugate diameters being one hundred and sixty and eighty feet respectively. . . . Upon either side of the serpent's head extend two small triangular elevations ten or twelve feet over. They are not high, and although too distinct to be overlooked, are yet too much obliterated to be satisfactorily traced." p. 97.

The coincidence is striking between the form of this remarkable work and those superstitions both of the ancient world and of the Mexicans, in which the serpent appears as a symbol of divinity or an object of worship.

In Licking county, Ohio, is another work of a similar

character. It is a rude representation of a lizard. The figure is about two hundred and fifty feet long by forty wide, the legs extending on each side thirty-six feet. "The framework is composed of stones of considerable size. The superstructure is of fine clay, which seems to have been brought from a distance, as no signs of excavation are apparent in the vicinity."

Such are these "wild enormities of ancient magnanimity." No other works resembling them have as yet been discovered in Ohio or the Southern States. We can only speculate on their origin and object. Nothing is known with regard to them but their existence.

The investigations of Mr. Squier having been confined to the Middle States, his work furnishes comparatively scanty information in respect to the ancient remains in other parts of the country. The facts concerning them which he has been able to collect are, however, of so interesting a nature, that it is much to be hoped that he may extend his researches through the Northern and Southern States, or that his example may incite others, more favorably situated, to undertake the necessary investigations.

The character of the ancient monuments in the Southern States seems to differ essentially from that of those which we have already described. Very few, in comparison with their great number, seem to have been erected for defensive purposes. Few enclosures of any kind occur, but in their place are found mounds of various forms, distinguished for their extraordinary regularity and great size. The truncated pyramid having a graded ascent to the top, and strikingly resembling, if not identical in shape with, the Mexican *teocalli*, is a form of frequent occurrence. The great mound at Seltzer-town, Mississippi, "consists of a truncated pyramid six hundred feet long by about four hundred broad at its base, covering nearly six acres of ground. Its sides correspond very nearly with the four cardinal points, its greatest length being from east to west. It is forty feet in perpendicular height, and is surrounded by a ditch at its base of variable dimensions, but averaging perhaps ten feet in depth. It is ascended by graded avenues. The area on the top embraces about four acres." There are upon it ten mounds; two of large

size, represented to be nearly forty feet high, and eight much smaller.*

We must conclude, from the form of this and other similar works, that they were the sacred places, the temples, of their founders. We shall refer again to the inference to be drawn from their resemblance to the religious structures of Central America and Mexico.

The remains in the North Western States, so far as they have been examined, offer features entirely peculiar. It is doubtful whether enclosures for defence exist, and lines of embankment of any sort are rare. The ground, however, has been little explored, so that we possess too few facts at present to admit any positive generalization. The tract of country lying between Lake Michigan and the Mississippi, through which the great Indian trail passes, is crowded with curious remains. "They consist of elevations of earth, of diversified outline and various size, for the most part constituting effigies of birds, beasts, reptiles, and of the human form; but often circular, quadrangular, and of oblong shape." Although very frequently extending to more than a hundred feet in length, they are rarely elevated more than one or two feet above the ground. They are seldom found isolated, but generally in groups arranged in various figures. Sometimes they are placed one after the other in long succession, on the level prairie; and sometimes in circular or irregular clusters. Most of the groups have one or more conical mounds connected with them, from which the whole collection of works may be overlooked.

Some of these works have been excavated, and have been found to contain human remains, while others have been opened without affording traces of any deposit. It is not unlikely that the existing tribes of Indians have used these earthworks as burial places; and that the bones which have been found have been placed in them within a comparatively recent period. However this may be, we are as yet entirely unable to explain the purposes of these curious works. They

* This curious feature is found in many of the ancient Mexican religious works. See Prescott, *Conquest of Mexico*, vol. i. p. 72; and it presents a general coincidence with the shape of many of the sacred structures of India and China.

present an enigma to be solved, if at all, only by careful and extended research.

We have deferred thus long the account of the mounds of the Ohio valley, that we might speak of them in connection with the relics of art which have been found in them. There is as yet no accurate account of the similar relics found in other portions of the country.

We have already noticed, generally, the great number of these mounds and their various dimensions. Like the enclosures, they are formed of earth, and, in some rare cases, of stone or clay, which must have been brought from a distance. They are situated, for the most part, within or near enclosures, though in some cases they are detached far from any other work. Till a late period, they have been believed to have served no other purpose than as places of sepulture; but the investigations of Mr. Squier have brought to light many curious facts, which prove that a comparatively small proportion of them are mounds of sepulture. The first class, according to Mr. Squier's arrangement, is that of the Altar or Sacrificial mounds. These occur only within, or in the immediate vicinity of enclosures, and are distinguished by two very remarkable circumstances. First, they are what, for want of a better term, may be called stratified.

Secondly; they cover altars of burned clay or stone, "on which are deposited various remains, which in all cases have been more or less subjected to the action of fire."

The stratification always conforms to the convex outline of the mound; and gives evidence of great care in their erection, by its regularity and completeness.

The altars are of various symmetrical shapes. "Some are small, measuring barely two feet across, while others are fifty feet long by twelve or fifteen feet wide. The usual dimensions are from five to eight feet." They appear, for the most part, to have been modelled of fine clay, and are usually burned hard, sometimes to the extraordinary depth of ten, fifteen, and even twenty inches. Some altars have been found but slightly burned, and it is remarkable that these are destitute of remains. The altars usually rest on the surface of the earth, or are raised slightly above it, on a layer of sand.

In a mound near Chillicothe, seven feet high by fifty-five

base, a shaft five feet square was sunk from the apex. It passed first through a layer of coarse gravel and pebbles of a foot in thickness, then through a stratum of earth about two feet thick. Beneath this occurred an even layer of sand, a little over an inch in thickness. Then came another deposit of earth eighteen inches deep, succeeded by another layer of sand; this was followed by a similar deposit of earth above one of sand, which rested on still another stratum of earth, a few inches thick, beneath which was an altar, or basin of burnt clay.

This altar was perfectly round. On the outside, it measured nine feet in diameter. It was hollowed in the middle, and the cup was five feet across. Its greatest height was twenty inches.

“The body of the altar,” says Mr. Squier, “was burned throughout, though in a greater degree within the basin, where it was so hard as to resist the blows of a heavy hatchet, the instrument rebounding as if struck upon a rock. The basin, or hollow of the altar was filled up evenly with fine dry ashes, intermixed with which were some fragments of pottery, of an excellent finish, and ornamented with tasteful carvings on the exterior. One of the vases of elegant model, taken in fragments from this mound, has been nearly restored. A few convex copper discs, much resembling the bosses used upon harnesses, were also found. Above the deposit of ashes, and covering the entire basin, was a layer of silvery or opaque mica, in sheets, overlapping each other; upon which, immediately over the centre of the basin, was heaped a quantity of burned human bones, probably the amount of a single skeleton, in fragments. The layer of mica and calcined bones, it should be remarked, to prevent misapprehension, were peculiar to this individual mound, and were not found in any other of the class.” p. 145.

About two feet below the surface of this mound, a human skeleton was found; and in many other mounds that were opened, skeletons were found resting near the summit. The strata are always broken and confused above them, showing that they have been buried since the completion of the mound. In relation to this point, Mr. Squier says: —

“It is a fact well known, that the existing tribes of Indians, though possessing no knowledge of the origin or objects of the mounds, were accustomed to regard them with some degree of veneration. It is also known, that they sometimes buried their

dead in them, in accordance with their almost invariable custom of selecting elevated points and the brows of hills as their cemeteries." p. 145.

A long mound, situated very near to that which we have described, presented, upon being excavated, several features of much interest. The altar, owing to its great size, was not completely uncovered, but enough was exposed to show that it must have been about sixty feet long, while its breadth at the base was fifteen feet, and eight feet at the top. Near the centre of the altar, two partitions were carried across it transversely, forming a small basin about eight feet square. Within this the relics which had been deposited in the mound were found.

"Upon penetrating the altar," says Mr. Squier, " (a task of no little difficulty in consequence of its extreme hardness) to ascertain its thickness, it was found to be burned to the depth of twenty-two inches. This could hardly be accounted for by the application or continuance of any degree of heat from above, and was therefore the occasion of some surprise. A more minute examination furnished the explanation. It was found that one altar had been built upon another; as if one had been used for a time, until from defect or other causes, it was abandoned, when another was *recast* upon it. The process had been repeated three times, the outline of each successive layer being so distinct as to admit of no doubt as to its cause. The partitions were constructed subsequently to the erection of the altar, as is evidenced from the fact that they were scarcely burned through." p. 150.

An even layer of earth was heaped up to the height of the partitions, all over the altar, and upon this were traces of numerous pieces of wood, four or five feet long and six or eight inches thick. "They had been somewhat burned, and the carbonized surface had preserved their casts in the hard earth, although the wood had entirely decayed. They had been heaped over while glowing, for the earth around them was slightly baked." The remains which were found on the altar were very numerous and of great variety. They had evidently been subjected to an intense heat, which had cracked to pieces the articles of pottery and most of those of stone, so that from more than a bushel of pieces of quartz and manganese garnet, which had been formed into "spear heads," only four perfect specimens were recovered. A single arrow point

of *obsidian** was found, and a number chipped out of limpid quartz.

“One of these was four inches in length, and all were finely wrought. Judging from the quantity of fragments, some fifty or a hundred of these were originally deposited on the altar. Among the fragments were some large pieces of the same material, shaped like the blade of a knife. Two copper gravers or chisels, one measuring six, the other eight inches in length, also twenty or more tubes formed of thin strips of copper, an inch and a quarter long by three-eighths of an inch diameter, were found among the remains. A large quantity of pottery, much broken up, enough perhaps to have formed a dozen vessels of moderate size, was also discovered. Two vases have been very nearly restored. They resemble, in material and form, those already mentioned, and have similar markings on their exterior. Also a couple of carved pipes; one of which, of beautiful model and fine finish, is cut out of a stone closely resembling, if indeed not identical with, the Potomac marble, of which the columns of the hall of the House of Representatives at Washington are made. The other is a bold figure of a bird, resembling *the toucan*, cut in white limestone.” p. 151.

The appearance of the basin upon which these remains were lying, gave evidence that human bones had been burnt upon it.

In the character of this altar and the remains which rested upon it, we again, as in so many instances, meet with facts for which we are unable to account. We are at a loss to conjecture what could have been the object in forming one altar over another, or why divisions, such as have been found in no other case, should have finally been made within the basin. Still more curious is the question which the calcined bones upon this and other altars suggest. Were the bodies of the dead burned here? or were living victims committed to the flames upon these altars, in obedience to a horrid superstition? The human sacrifices of the ancient Mexicans may countenance the latter supposition.

Among the great number of mounds of this class which were examined, no two presented the same features in detail. Each had points of interest peculiar to itself. The character of the relics found upon the altars was extremely various,

* We believe that *obsidian* is not found *in situ* north of the volcanic region of Mexico on this continent.

though it was noticed as a curious feature, that upon particular altars some one article seemed often to predominate. Thus, in several instances, remains of pottery, accompanied by little else, were found; in another instance, not far from two hundred pipes carved in stone were discovered on a small altar; these were accompanied by pearl and shell beads, and numerous articles of copper. The number of these pipes, however, was not so remarkable as the beauty and skill with which they were formed. The bowls were carved figures of animals.

“All of them,” says Mr. Squier, “are executed with strict fidelity to nature, and with exquisite skill. Not only are the features of the various objects represented faithfully, but their peculiarities and habits are in some degree exhibited. The otter is shown in a characteristic attitude, holding a fish in his mouth; the heron also holds a fish; and the hawk grasps a small bird in his talons, which it tears with its beak. The panther, the bear, the wolf, the beaver, the otter, the squirrel, the raccoon, — the hawk, the heron, crow, buzzard, swallow, *paroquet*, *toucan*, and other indigenous and southern birds, — the turtle, frog, toad, rattlesnake, etc., are recognized at first glance.” p. 153.

These are the most remarkable relics which have been found in the mounds. Their character is so striking, and leads to such valuable conclusions with regard to the progress of art among the mound builders, that we shall speak of them again hereafter.

One of the mounds which was opened presented in place of the usual sand strata a layer of large flat stones. The altar itself was formed of earth faced with slabs of stone of regular form and thickness, and fitted closely together. In another mound which presented various features of great interest, the basin of the altar, measuring seven feet in diameter, was paved with the utmost precision with small round stones. They were firmly laid in the sand and presented a regular and uniform surface. Upon them rested a thin layer of charcoal and burned human bones. “Ten well wrought copper bracelets were also found, placed in two heaps, five in each, and encircling some calcined bones, — probably those of the arms upon which they were originally worn.” These two mounds are the only ones, as yet described, which possess altars of stone.

Another mound presented features of such anomalous char-

acter as to lead to some doubts whether it should be referred to this class.

"It has two sand strata ; but instead of an altar there are two layers of discs chipped out of hornstone, some nearly round, others in the form of spear-heads. They are of various sizes, but are for the most part about six inches long, by four wide, and three quarters of an inch or an inch in thickness. They were placed side by side, a little inclining, and one layer resting immediately upon the other. Out of an excavation six feet long by four feet wide, not far from six hundred were thrown. The deposit extends beyond the limit of the excavation on every side." p. 158.

But we must leave this class of mounds, although we have by no means exhausted the points of interest in Mr. Squier's chapter upon them. We pass to the Mounds of Sepulture. Scattered over the country which the mound builders occupied, these monuments occur in almost numberless profusion, sometimes standing isolated and solitary, sometimes in close connection with other works. Numerous, however, as they are, they were not the burial places of the nation, but the tombs of single favored individuals. Only one of them, the celebrated Grave Creek Mound on the banks of the Ohio, has been found to contain more than a single skeleton of the ancient race. The forms of burial throughout the nation seem to have varied but slightly. The body was enveloped in bark or coarse matting, of which the dust now alone remains, or placed in a rude sarcophagus of wood, which, although long since crumbled away, has left its impression in the earth which surrounded it. In a few instances, a sepulchral chamber has been found built up of stones. Works of art of various kinds were deposited with the dead. Bracelets and other personal ornaments were most common. Sometimes weapons and vases of pottery have been found, and often large sheets of mica cut into regular forms lie in profusion about the skeletons. These remains are alone unchanged by time ; the skeletons themselves crumble into dust under the slightest touch, like those of the royal inhabitant of the Etruscan tomb. From all the mounds of this class which were opened only one perfect skull could be recovered.*

* Mr. Squier states that "in the barrows of the ancient Britons, entire well preserved skeletons are found, although possessing an undoubted antiquity of at least eighteen hundred years."

In most of these sepulchral mounds, a layer of charcoal has been found a few feet below their surface. It varies in extent in different cases, "and would seem to indicate," says Mr. Squier, "that sacrifices were made for the dead, or funeral rites of some description, in which fire performed a part, celebrated. This is further confirmed by the fact that fragments of bones, and some few stone implements have been discovered in the layer of charcoal. The fire in every case was kept burning for a very little time, as is shown from the lack of ashes, and by the slight traces of its action left on the adjacent earth. That it was suddenly heaped over while glowing is also certain."

In a few cases, it has appeared that the body of the dead was placed upon a funeral pile and burned, before being covered by the earth. No sign distinguishes the tomb of the chief, or the priest. The heap of earth preserves no record of the name or title of its occupant. His hope of an immortal remembrance is fulfilled, but his memory has perished.

Another chapter has been added to the history of urn-burial by discoveries made in some of the Southern States. Earthen vases have been found within mounds, buried beneath the level surface of the earth, containing human remains, generally, but not always, burned. When unburned, the skeleton appears to have been packed in the vase after the flesh had been decomposed. In the mounds near Camden in South Carolina, ranges of these vases have been disinterred; while in other places in Carolina and Georgia they have been found in still greater number. We must wait, however, for further investigations to determine over what extent of country this method of burial prevailed, and to show what inferences may be drawn from it in regard to the state of civilization among the Southern mound builders.

We have already noticed the temple or sacred mounds of the Southern States. As we proceed northward this class of mounds becomes of more and more rare occurrence. Their distinctive features are, however, clearly marked. The great truncated mound at Cahokia, Illinois, is even more remarkable than that of Selzertown, Mississippi. Its form is that of a parallelogram, seven hundred feet long by five hundred wide at the base. It is ninety feet in height. Upon one side is a terrace, to which a graded ascent leads up. Many

years ago, by a strange chance, this terrace became the garden of the monks of La Trappe. The investigations with respect to these temple mounds have, as it were, just begun. Much more remains to be done than has already been accomplished, and there can be no doubt that the result of a thorough examination of them will be of great interest and value in showing the relations between the works of the ancient inhabitants of the different portions of the continent, and their comparative advance in civilization.

Many mounds have been examined in the course of the researches in Ohio, which, from some anomaly in their construction, do not appear to belong to any of the classes before described. One of the most curious of them presented the features both of an altar and sepulchral mound, while it possessed some points entirely peculiar to itself. Other mounds have been found composed of closely compacted ashes mingled with bits of charcoal and burned bones. "It has been suggested that these mounds were composed of the ashes of the dead, burned elsewhere, but finally thus heaped together."

Some small mounds have been observed, composed altogether of small stones. These differ entirely from the rude heaps of stones which are scattered through our country, and which are doubtless to be ascribed to the modern Indians. A large heap near Chilicothe, measuring one hundred and six feet in length, by sixty in width, and between three and four in height, was opened by throwing the stones out from the centre without disclosing any remains.

The last class of mounds is that of the mounds of observation. These are found on the tops of hills, and on other commanding points, their object being suggested by their position. The signs of fire which still mark some of them would seem to show that beacon fires were lighted upon them to give notice of approaching danger, and they are oftentimes so placed that the flames might have been seen for many miles around. Still, even this supposition must be received with doubt.

We have already had occasion to speak of some of the remains of ancient art which have been found in the mounds; and we shall now, following as usual Mr. Squier's text, proceed to describe some of them more particularly. They

have only been found either with the dead or upon the altars before described ; and such articles alone have been recovered as have been able to resist the decaying influence of time. Articles of pottery, bone, ivory, shell, stone, and metal remain unchanged, while those of wood or cloth have left nothing but their dust and their impressions to show that they once existed.

The specimens of pottery which have been recovered have been found only within the altar mounds, and always in fragments. It has been possible very nearly to restore a few of the vessels so as not only to preserve their graceful forms, but to show the character of the ornaments upon their sides. They very far surpass in elegance and beauty of finish any of the pottery of the existing Indian tribes, and resemble in their general appearance the works of the ancient Mexicans and Peruvians. They are, for the most part, made of a fine clay with a slight silicious intermixture, and present the appearance of having been moulded by the hand alone. Many of them are of such delicacy, and of so small size, that they can have been intended only for some rare service ; the greater number, however, are comparatively coarse and large.

A few terra-cottas have been found in the mounds ; others have been ploughed up at the South, where they are said to be abundant. Many of them are pipes shaped into the forms of animals or human heads. Some years ago an article of baked clay was found near Nashville, Tennessee, shaped into a caricatured likeness of a human head, and containing six small clay balls, which must have been inserted before the burning of the plaything. But however curious these scattered images may be in themselves, they have not as yet been collected in sufficient numbers to admit of any conclusions in regard to the progress of the arts of design among this ancient people.

The only metals which appear to have been worked by the mound builders are copper and silver, and the latter has been found in only a single undoubted instance. Galena in its native state, has been discovered in considerable quantities in the mounds. The use of iron seems to have been unknown ; nor did the mound builders possess the knowledge of smelting copper, or alloying it with tin, after the manner of the Mex-

icans, to give it an artificial hardness. They appear to have worked it cold, and to have shaped their copper instruments by simple hammering. This is the more strange, as the heat upon the altars was often so great as to melt the articles which were placed upon them, a circumstance which could hardly have escaped the notice of their builders.

There is no doubt that the mines of Lake Superior were extensively worked by this forgotten people. The miners of the present day have found traces of their excavations and the remains of their implements, while the copper articles rescued from the mounds of Ohio, have proved upon examination to be made of the mineral from the Lakes. Axes and gouges, drills, gravers, spear-heads, and knives of this metal, some of them highly finished, are among the implements which have been found in the mounds ; and polished copper bracelets, gorgets, round discs, buttons, and beads, were ornaments with which the mound builders decorated themselves.

It would be impossible here to enumerate in detail the various articles of stone, shell, and bone, some of them designed for use, some for ornament, some uniting both these objects, and some whose purpose can only be conjectured, which have been discovered by the explorer of the mounds. Many stone weapons, arrow-points, spear and club heads, axes and knives, were laid by the side of the dead warrior, or thrown upon the burning altar. Peaceful and domestic implements and ornaments were also often buried. Stone pestles and pipes, long tubes of a fine grained slate and limestone, beautifully polished, and drilled with exquisite precision ; needles and awls of bone ; myriads of beads, the use of which must have been as extended among this ancient nation as among the modern Indians, of every shape and size, and made of shell, bone, the tusks of animals, and very many even of pearls, are some of the articles which have been disinterred.

The perforated teeth of the wild cat and the wolf, and plates of mica cut into various forms, which may have been hung as ornaments upon the dress, occur not unfrequently. Many ornaments of carved and polished stone, perforated with fine holes, have been met with, which, according to their shape, may be supposed to have been used for pendants and gorgets.

But by far the most curious and interesting class of relics

are the sculptures. We have already quoted Mr. Squier's account of those which were found in one of the altar mounds, but they deserve a more detailed description. The mound builders had advanced beyond the mere rudiments of art. Their sculptures, although simple in design, exhibit the greatest fidelity to nature and delicacy of execution. They surpass in these respects any similar works of semi-civilized nations with which we are acquainted. They exhibit none of those extravagances, the caricatures of nature, in which the art of such nations usually indulges itself. They give evidence of careful observation and refinement of taste. The skill of the artist was chiefly exhibited in the construction and ornament of the pipe; indeed, scarcely any sculptures are noticed which were not designed to form this implement.* It is not too much to infer, that the pipe held the same important place with the mound builders as with the Indians of the present day.

Among the great variety of figures found in the mounds, four only represent the human head. Other sculptures of the head have been found, however, in such position as to leave little doubt that they are the work of the mound builders. The general accuracy of the sculptured representations of animals justifies us in believing these heads to be faithful copies of nature and to present with accuracy the features of this dead race. We learn from them that the mound builders tattooed or painted their faces, that they sometimes wore rings in their ears, sometimes pearls in a fillet around their heads. We are brought, as it were, face to face with them, and buried long as they have been, we find that they possessed characteristics of feature which mark them as one of the branches of the great American family of nations.

The sculptures of animals embrace many of the species which are now found within the region of the mounds. They rival the modern bronzes of Paris in their animation and

* The shape of the ancient pipes differed widely from that of those now in use, and can hardly be understood without an engraving. We give Mr. Squier's description. "They are always carved from a single piece, and consist of a flat, curved base, of variable length and width, with the bowl rising from the centre of the convex side. From one of the ends, and communicating with the hollow of the bowl, is drilled a small hole which answers the purpose of a tube; the corresponding opposite division being left for the manifest purpose of holding the implement to the mouth." p. 228.

accuracy. The hawk is found tearing a small bird, the swallow just springing forward for his flight, the tufted heron striking a fish. "Nothing" says Mr. Squier, speaking of this last figure, "can surpass the truthfulness and delicacy of the sculpture." The minutest feathers are shown; the articulations of the legs of the bird, the gills, fins, and scales of the fish, are all represented; yet this miniature figure forms part of a pipe which, in its greatest dimensions, is but four inches by two.

Thus we might go on through the long list of birds and reptiles; but the examples we have selected will serve to give an idea of the general characteristics of the other sculptures. One important fact, however, is still to be noticed. Not only are the animals of the region of the mounds represented, but in two, and perhaps more, instances animals which could never have inhabited that part of the country are sculptured with equal accuracy and spirit. Seven representations of the *manitus*, or sea cow, have been taken from the Ohio mounds. This animal is found only in tropical waters. It is rarely met with on the coast and in the rivers of Florida, and, we have the highest authority for stating, that it can never have occupied much more extended limits on what is now the coast of the United States. Sculptures of the toucan, also, a bird known only to the tropics, and rarely occurring even so far north as Mexico, have been found with the other figures in the Western mounds. We shall speak hereafter of the inferences to be drawn from these and other analogous facts.

With the present appliances of art, it is difficult to conceive the amount of labor which must have been bestowed upon these sculptures to give them their accuracy of form and beauty of execution. The first slow process must have been to rub or grind them upon other stones, perhaps with the aid of some silicious powder, to bring them into a rough shape; they must then have been finished with sharp cutting instruments, and the hand as well as the eye of the sculptor must have been well practised, to enable him to shape the clear outline, to cut the fine marks, and to trace the delicate feathers with such beauty and finish. The material of which many of the figures are composed is a red porphyry, so hard as to turn the edge of the finest tempered knife.

The cutting instrument of the mound builders cannot have been metallic ; it was probably of obsidian, which, although capable of receiving a fine edge, is easily blunted and chipped. A high value must therefore have been placed upon works elaborated only with such difficulty and so long labor ; and this inference is curiously corroborated by the care and ingenuity with which we find the sculptures, when broken, were repaired. Sometimes holes were drilled diagonally in the detached parts, into which copper wire, or wooden pegs were inserted, thus binding the pieces together. Sometimes bands of copper were placed around the fracture, while “occasionally the entire pipe, when much injured, seems to have been plated over with that metal.”

We have from time to time, within a few years, had accounts of the discovery of stone tablets bearing alphabetical or hieroglyphical inscriptions. Some of them have excited much attention both in this country and in Europe. German, Danish, and French philologists and archæologists have been laboriously disputing about the character of the most noted of these tablets, the one said to have been discovered in the Grave Creek Mound. Mr. Squier shows by a few general considerations the great improbability of the mound builders having possessed an alphabetical or hieroglyphical system, and in an able paper read by him before the American Ethnological Society, and published in the second volume of their valuable transactions, he has satisfactorily proved that little credit is to be attached to the pretended genuineness of the Grave Creek tablet.

A tablet is figured in the work before us, which was found in a mound in Cincinnati. The figure engraved upon it is regular and simple. Mr. Squier suggests, that, like the stamps of burned clay in Mexico, it was “used in impressing ornaments upon the clothes or prepared skins.”

In another Ohio mound, several sculptured tablets, each representing a coiled rattlesnake, were discovered. Their object must of course be matter of conjecture. It is not improbable that they were connected with the superstitions of their makers. The rattlesnake was a symbol of wide use and important signification among the ancient Mexicans and the nations of Central America, and a similar superstition

may have extended among the northern race of mound builders.

Only one skull incontestably belonging to this race was recovered entire in the course of these investigations. It was submitted for examination to the eminent craniologist, Dr. S. G. Morton. It presented in a striking degree "features characteristic of the American race, but more particularly of the family which he denominates the Toltecan, and of which the Peruvian head may be taken as the type."

In his concluding chapter, Mr. Squier presents a few of the more prominent and striking inferences to be drawn from the facts he has so laboriously collected. With the same good judgment which is shown throughout his work, he indulges in no uncertain speculations. Certain general conclusions must be adopted in view of the facts presented.

The race of the mound builders was numerous and widely spread. From the general similarity of their remains in all portions of the country, we may conclude that their customs, manners, and religion were essentially the same throughout the whole of the vast territory which they covered. The number and magnitude of their works proves that they were a stationary people. When we consider the immense labor which must have been expended in erecting many of these works, labor which would be immense even with the aids of our own day, we are prepared to believe that the population must have been dense, and admitting this fact, we must admit still further, that in proportion to the density of the population must have been the practice of agriculture among the nation as a means of support. This agricultural character is shown by the very position of their more important works, which are almost universally situated in the most fertile portions of the country. This view is also sustained by the character of their works of defence. It is obvious that they were intended to resist a series of aggressions; that they are the works of a people exposed to frequent attacks, who by long experience had become skilled in the art of defence. The magnitude of their religious works likewise proves, at the same time, the fervor of their superstition and their long establishment throughout the country in which they erected such memorials of their religion.

These conclusions might be supported at great length, but

they are so obvious that it would be an unnecessary labor to do more than state them. Still, they are all that can be told as certain with regard to the lives of the mound builders. As yet, all else is matter of conjecture. The people left no record of themselves on pictured or sculptured walls. No inscriptions recording the deeds of their race, are on their tombs or their temples. No hieroglyphic stones contain the history of their rulers or the narrative of their wars. There is no monument from which may be decyphered the story of their lives. All is buried in impenetrable obscurity. Their origin, their power, their disappearance are all equally unknown. They utterly passed from the memory of the succeeding races. Tradition of them had perished before history was ready to receive it.

It is not possible to determine with certainty even the period when they flourished. We have noticed some of the indications of the antiquity of their works. Trees whose positive age is six or eight hundred years are growing on their embankments, surrounded with the mouldering trunks of others still more old. The forests of which these trees formed a part, which cover the ancient enclosures, are not to be distinguished from the primitive forests where no clearing has ever been attempted. "The process by which nature restores the forest to its original state, after being once cleared," says President Harrison, "is extremely slow." It is the work not of a few years, but of centuries.

The circumstance that none of the ancient remains are found on the latest formed terrace of the Western rivers is a fact of much importance in estimating their probable antiquity. We are inclined to believe, however, that although in many cases this terrace has been formed since the occupation of the country by the mound builders, that they may have been deterred from erecting any permanent structures upon it, where it did exist, by the recurring danger of its overflow by the river.* We make this suggestion simply because we are unwilling to adduce any argument for the antiquity of these remains which may be open to question.

In some instances, the rivers in shifting their channels have

* We are aware of the objection to this view, in the fact that the latest formed terrace is frequently raised so much above the level of the stream as to preclude the possibility of overflow.

encroached upon the works, and afterward receded to a considerable distance from them. "In the case of the High Bank Works, the recession has been nearly three fourths of a mile, and the intervening terrace or 'bottom' was, at the period of the early settlement, covered with a dense forest." This recession and subsequent forest growth must of necessity have taken place since the river encroached upon the ancient works.

From these and other similar facts, it must be left to geologists to ascertain the age of these remains. No general rule can be given with regard to the action of the Western streams, by which even their approximate age may be determined. We may be sure, however, that it is an age measured by many hundreds of years. Mr. Squier, with a spirit worthy of high commendation, has shown no desire to enhance the interest attaching to these works by ascribing to them a very high antiquity. In this respect, as throughout his book, he gives evidence that his chief object has been to present the simple truth rather than what might excite attention as extravagant or wonderful.

We have now gone through this volume, and even in the brief abstract we have given, the interest and value of the researches whose results are contained in it, has, we trust, been distinctly shown. There remain a few words yet to be added. Mr. Squier refrains from entering upon the subject of the origin of the mound builders and their relation to the other American nations. He proposes to treat of these, and of other points connected with them, in a future more elaborate work. While waiting for this with raised expectations, as it will undoubtedly add much to our knowledge of the ante-Columbian history of our continent, we would present here a few general considerations respecting the race of the mound builders.

We have already noticed the coincidences between the form of some of the more remarkable temple mounds, and that of the teocallis of Mexico. The resemblances might be traced at much greater length. We have described the Serpent Mound, and although we are ignorant of its object, it cannot but recall the important place which the symbol of the serpent held in the ancient Mexican superstition. We have seen that obsidian is not unfrequently found among the depo-

sits in the mounds, and this mineral can only have been brought from the volcanic region of Mexico. The sculptures of the toucan prove an acquaintance among the mound builders with the birds of Central America. The pearls which form the eyes of their sculptured figures, and which were used as ornaments, can only have come from fisheries on the Gulf. These facts, and others which might be added to them, prove a connection between the mound builders and the ancient inhabitants of Mexico.

The question now arises, how intimate was this connection? Was it that of two distinct races, or was it that of branches of the same family? Resting our conclusion upon the character of the sculptured heads, and of the skull found in the mounds, setting aside all facts with regard to which a doubt might exist, we are led to the belief that the ancient inhabitants of Mexico and the ancient inhabitants of the United States belonged to the same family; that is, to the Toltecan family of races.

It is the opinion of the learned and venerable Mr. Gallatin, and his opinion in all such matters is entitled to the very highest consideration, that "whatever may have been the origin of agriculture in America, it undoubtedly began between the tropics."* Maize, which was the chief foundation of American agriculture, was, according to Mr. Gallatin's view, indigenous in Mexico, and its cultivation spread from that country north and south. It is impossible that an agricultural people, such as we have seen the mound builders must have been, could have possessed any other plant capable of yielding a sufficient supply of food for their support. Their agriculture was then of Mexican origin.

Adopting this opinion, we must conclude that the race of mound builders themselves originated from the South. It is Mr. Gallatin's opinion that they were a colony from Mexico.

The chronology of the traditions of the early history of Mexico is extremely vague and uncertain. The period of the possession of that country by the Toltecs cannot be fixed with any pretension to accuracy. It may have been, according to the doubtful opinion now commonly received,

* *Transactions of the American Ethnological Society.* Vol. I., p. 198.

somewhere about the seventh century of our era. That they were dwellers in the country for several centuries, that they left the indelible impress of their civilization upon the races who succeeded, and then passed away mysteriously as they had come, are matters of less doubt. The mound builders may have been a colony from this race. If this were the case, it would give their works an antiquity of about a thousand years.

Another, and perhaps a more probable, opinion with regard to this forgotten race, would make them the original stock of the Toltec family. A tradition, universally spread among the ancient inhabitants of Mexico, declares that the Toltecs came from the region of the North. Much fruitless labor and research have been expended in determining the place from which they sprang. It is not impossible that they descended from the valley of the Mississippi. Migrating from the North to the South, the colder regions were left for warmer and more productive countries. The pressure of enemies may have given additional inducement to their migration, and slowly, year after year, the whole nation may have left their temples and burial places, and passed to strange lands and new abodes.

Should this view be correct, we must ascribe to their remains in the United States, at least, an equal antiquity with those of the Toltecs in Mexico and Central America, if not, indeed, a higher one. This would serve to explain the evidences of extreme age which some of them present. It is, perhaps, easier to attribute to them a greater than a less antiquity than a thousand years.

But if we adopt this view, we are compelled to give a northern origin to their agriculture. This difficulty can only be removed by the supposition that the valley of the Mississippi was as suited to the indigenous growth of maize as the plains of Mexico. We hesitate to suggest this view, in opposition to Mr. Gallatin's opinion, but the climate and soil of the valley of the Mississippi were, perhaps, as well fitted as the more southern parts of the continent for the production of maize. Future researches may determine which of these hypotheses, or whether either of them be correct.

Here we stop. The same mystery which shrouds the disappearance of the Toltecs of Mexico, shrouds that of the

mound builders of the North; They laid the foundations of works for eternity,

“ But sad mortality o’erswayed their power,”

and they themselves utterly passed away. We know not what fearful pestilence, or what terrible enemy may have overcome them. Other perished nations have survived in the history of their conquerors. But no historian existed for this people. No wandering poet, singing for all ages, told the story of their deeds, or the tale of their wrongs. Ruler and subject, priest and warrior, are buried in one overwhelming oblivion. Forgotten by men, their record is with God alone.

We have already stated that Mr. Squier has in preparation a work which will contain the general results which he has deduced from his discoveries, and his subsequent studies. Such a work promises to be a very valuable contribution to the Ethnology of this country. The science of Ethnology is yet in its infancy. Embracing the results of widely separated investigations, leading to highly important conclusions with regard to the distribution and progress of our race, it is a science which may well engage the attention of students in all portions of the world. But America is the field from which the richest harvest is to be reaped. Not only does it offer for study the interesting and anomalous civilization of its ancient inhabitants, but nowhere else are to be found at present so many races, existing under circumstances so well suited for the investigation of their characteristics and destiny. Our scientific men will not permit such opportunities to be lost. Already, in different parts of the country, the science is beginning to receive the attention which it deserves.

We cannot close without expressing our hope, that Mr. Squier may be encouraged to proceed in investigations which no other is fitted to accomplish so successfully. Every year is adding to the difficulty of exploring the memorials of the mound builders. Works of the highest interest in every portion of the country are yet to be examined. Their investigation cannot but throw new light on the ante-Columbian history of America. If any thing is to be done to illustrate the dark subject of the origin of the American civilization, it is to be done in this field. No other subject presents

such powerful claims to the attention of American archæologists. It is not possible for one man unaided to accomplish all that should be done. It is hardly to be expected that even one of our historical or literary societies should alone furnish the necessary aid. But why should not several of them join in a work which it is the common interest of all to have accomplished? Let them form an honorable partnership to effect it. The New York Historical Society have already shown their interest in the subject by enabling Mr. Squier to undertake the examination of the ancient works in their own State. The Historical Societies of our Southern and Western States will not refuse to do their part, and the American Antiquarian Society at Worcester could make no better disposition of their funds than by aiding such a work. It was proposed by this Society, at one time, to publish Mr. Squier's volume among their transactions; a second volume from him would be no less worthy of a place there than the first.

ART. X. — *Illustrated Poems*. By MRS. LYDIA H. SIGOURNEY. With Designs by Felix O. C. Darley, engraved by American Artists. Philadelphia: Carey & Hart. 8vo. pp. 408.

THIS edition of Mrs. Sigourney's *Poems* is uniform with the superb Philadelphia editions of Longfellow, Willis, and Bryant, the fact of a poet's appearing in so beautiful a dress being of itself evidence of fame. The reputation of Mrs. Sigourney, indeed, is so well established, that she may be said to occupy a place from which she can neither be depressed by detraction nor elevated by panegyric. Reviews are instituted to anticipate the slow decisions of time, to make "the future in the instant;" and they doubtless often do good service by speaking the moderate language of posterity about books which have been exposed to immoderate puffing or censure from contemporaries; but after a reputation has been fixed on a solid basis of public esteem, they can do little more than point out the causes of success, and leave the task of inflating or depressing it to the professors of admiration or